

MARINE MAMMAL/VESSEL STRIKE (MMVS) WORKING GROUP
Stellwagen Bank National Marine Sanctuary, Scituate
9:00am to 5:30pm
5 April 2004
Meeting 4

MEETING SUMMARY

RECOMMENDATIONS:

Research Recommendations: Establish through dedicated surveys and/or passive acoustics between 1 November and 30 April right whale use of SBNMS, particularly to document their movements into and out of their CC Bay critical habitat.

Rationale: While it would be helpful to have year round dedicated survey effort, it is particularly important to assure dedicated effort during this time period for which little data from dedicated surveys exists. It would also be helpful to provide additional surveys during summer to supplement anecdotal reports from whale watch vessels.

POSSIBLY SEVERAL OTHERS THAT NEED TO BE WORDSMITHED found at the end of the summary.

ACTION: (Dave and Mason) – **Contact Alaska and Hawaii Regions to obtain a better count of Whale Watching boats within those regions.**

A comparison of whale watching boats in other regions to whale watching boats within Stellwagen Bank may help better analyze the causes of strikes. Boats per whale would be the best analysis for comparison but it cannot be obtained.

ACTION: (Dave and Mason) – **Contact Coast Guard for attendance at the next meeting.**

A representative from the Coast Guard at the next meeting has been requested by group members.

ACTION: (Dave and Mason) – **Contact New England Aquarium about Jet Propulsion**

A study about the risks of Jet Propulsion and the potential risk to marine mammals may have been done by New England Aquarium. This study may help the working group investigate the effect of high speed jet boats on marine mammals.

ACTION: (Open to all members) – **Rationales**

All working group members are welcomed to write their own rationales to be submitted to the SAC.

ACTION: – **Glossary of Terms used in working group Recommendations**

The recommendations and action plans presented to the SAC should include definitions of particular wording and terms used in the recommendations.

Working Group Attendees

NAME	WG SEAT and AFFILIATION
Mason Weinrich	WG Chair, Whale Center of New England
David Wiley	WG Team Lead, SBNMS
Amy Knowlton	NEAq Right Whale Research, Science
Andy Glynn	General Category Tuna Association, Tuna Fishing
Bill Eldridge	Peabody Lane Shipping, Shipping
Brad Wellock	MassPort, Shipping
Brian D. Hopper	NMFS
Colleen Coogan	Independent, Conservation
David Gouveia	NMFS Protective Resources, NMFS
Erin Heskett	IFAW, Conservation
Greb Silber	NMFS, Silver Springs, MD
Hauke Kite-Powell	WHOI, Science
Jack Kent	MA Marine Trades Assoc., Recreational Boating
Just Moller	SBNMS, GIS Research Analyst
Karen Steuer	National Environmental Trust, Conservation
Michael Prew	Captain John Boats, Charter Boats
Mike Thompson	Perot Systems, GIS Analyst
Moria Brown	NEAq Right Whale Research, Science
Nathalie Martens	Whale Center of New England
Pat Gerrior	NMFS
Regina Asmutis	IWC, Conservation
Richard Meyer	Boston Shipping Association, Shipping
Rick Nolan	Boston Harbor Cruises, Shipping
Rowan Glen	Whale Center of New England
Sharon Young	Humane Society of the US
Tim Cole	NMFS NEFSC, NMFS
Tom King	Charter Boats

WELCOME, INTRODUCTIONS, AND ADOPTION OF AGENDA

Mason Weinrich (Chair) opened the meeting at 9:00am and reviewed action items from the last meeting. The agenda and an overview of the presentations of the meeting were highlighted.

OLD BUSINESS AND ACTION ITEMS

Presented by Mason Weinrich, WCNE

Review of Action Items from the last meeting on March 9th, 2004 at National Marine Fisheries Service NE Region, Gloucester.

A better analysis of the whale watching effort within Stellwagen Bank compared to other regions would help to better evaluate the guidelines and evaluate whale strike occurrences and causes. Although statistics were not prepared for this meeting, the group agreed that the northeast region probably has the highest whale watching effort.

The whale watching community would like to have the comparison made to help support the effectiveness of the whale watching guidelines since their implementation. The strike data suggests that fewer strikes in the northeast region have occurred since the guidelines went into

effect. The data also suggests fewer strikes in the northeast region than in other regions since the guidelines went into effect.

A further investigation into the spike in vessel speed during the late 1990's revealed that the cause of the spike was due to the drop out of slower vessels. The industry agreed that the drop out of slower vessels would make sense around that time period, however, the drop out may not accurately account for the upgrading of vessels. The drop out of slower vessels was most likely because of the industry shifting or upgrading to faster boats. The industry and the data indicate that vessel speed increased to at least 18 knots for many of the vessels around 1998. The mean speed of whale watching boats prior to 1998 was only 13 knots.

The Northeast Region Whale Watching Guidelines Compliance presentation was presented to a group of whale watching captains on Saturday April 3rd. Rick Nolan, of Boston Harbor Cruises helped to arrange the meeting. Further opportunities to present the compliance information would benefit the whale watching community and would help to raise awareness.

Just Moller is scheduled to present Phase II of the Guideline Compliance Study at the next meeting on May 3rd. The presentation will focus on the approach and departure compliance to the whale watching guidelines.

NEW BUSINESS

Re-scheduling of the May 4th Meeting

The May 4th meeting has been re-scheduled to Monday, May 3rd and will be held in Boston. This will be meeting number 5 and will be the second to last meeting. The last meeting will be held on Tuesday, May 25th at a location still to be determined.

Due to time constraints the group agreed to have a working lunch begin working towards action plans and recommendations. The afternoon was set aside for trying to produce commercial shipping and whale watching recommendations for the SAC that the working group members agreed upon.

Action Plans: Format and Contents

Presented by David Wiley, SBNMS Working Group Team Lead

Action plans and recommendations to the Sanctuary Advisory Council should be coming together so that they can be reviewed and edited by the group. David presented an example of a draft action plan from the Ecosystem Alteration working group that could be used as a template for the Vessel Strike working group.

The Draft Action Plan Outline:

Overview: An overview of the action plan to be presented to the SAC. This would include a brief history of the focus of the working group and of any pre-existing conditions that may pertain to the working group. This would also include a overview of the proposed strategies to the SAC.

Strategies: A list of strategies that the group agreed were important for the SAC to recognize and evaluate the proposed rationale(s).

Rationale: Each strategy would have either an agreed upon rationale or multiple rationales (options) for the SAC to evaluate.

All of the rationales will be presented to the Sanctuary Manager where the one of the rationales or a mixture of the rationales could be chosen. A consensus from the group would be a more powerful option than having multiple options. The recommendation may be an action item or just a recommendation.

Presentation: The Mandatory Ship Reporting System (MSR) and Commercial Vessel Traffic around the SBNMS

Presented by Patricia Gerrior, NMFS

The Mandatory Ship Reporting (MSR) System is administered by NOAA and the US Coast Guard which has been endorsed by IMO. The system became operational in July of 1999 where ships would report to shore-based stations and would receive in return a message about Right Whale locations, general precautionary guidelines and an expiration date of the message.

The MSR system includes ships greater than 300 tons and excludes most of the tug and barge traffic. Vessels report when in-bound or entering the area. However, many ships report both in-bound and on departure through the area. There is still a learning curve which may include language barriers and to the increased number of regulations for the ship to adhere to since 9/11. There is approximately a 70% compliance rate.

Vessels report their true course, speed, destination port and route information. The route information can be given as a series of waypoints, entrance and departure waypoints, or rhumbline (start and end points). The rhumbline reporting has problems associated with it including the reporting on SE Cape Cod would show the rhumbline transiting on land over Cape Cod.

The Boston traffic lane has the highest usage which runs through middle and southern SBNMS. Other high use routes include the route cutting across northern SBNMS and across central SBNMS. The majority of vessels reporting to MSR North report their destination as Boston, Portland, Saint John and Nova Scotia.

Cape Cod Canal traffic is reported for vessels greater than or equal to 65 feet. The Army Corps of Engineers record most trips including; tankers, towboats, fishing vessels, yachts, military vessels, passenger, dry cargos, tanker barges and other vessels.

Roughly 4,000 east bound and 4,000 west bound vessels larger than 65 feet transit the canal each year. During 2003 the Army Corp reported an average of 662 trips per month with May through September being the peak months. Vessels greater than 65 feet for 2003 consisted of 55% tug and tow, 18% passenger (dry cargo), 2% tanker, 25% all others. An estimated 7,900 Vessels less than 65 feet transited the canal in 2003.

There are several other vessel traffic monitoring possibilities including; passive acoustic buoys, vessel traffic monitoring system, radar systems. Automatic Identification System (AIS) is a shipboard broadcast system that acts as a transponder using VHF radio. Working group members are aware of the AIS rule and many of the vessels may be required to have it installed by July 1, 2004.

NOAA fisheries will be proposing measures for Cape Cod Bay & Off Race Point for Right Whale protection. Proposed measures may result in the Coast Guard conducting a Port Access Route Study (PARS).

Presentation: Commerical Shipping and Cruise Data from the Port of Boston

Presented by Brad Wellock, Massport

Commercial shipping and cruise data from the port of Boston were collected from 2003 billing records. The port of Boston does not have a central archive of vessels coming in and out of port. Boston, unlike other ports, and does not have a place to report. Data for 2003 was summarized according to vessel type (Container, Tanker, LNG, Salt, Scrap and Cruise ships) for all vessel that had a draft of 35 feet or more on one leg of their voyage. Brad's table consisted of 396 large commercial vessels.

Results

Container	59
Tanker	161
LNG	54
Salt	22
Scrap	5
Cruise	95

All of the boats require a harbor pilot when transiting Boston harbor. A State harbor pilot is required for all foreign flagged vessels. The data collected fir Boston harbor does not account for nearly as many vessels that transit SBNMS. Roughly half of the vessels recognize Boston as there port of call. Pilots do make an effort to check whether or not ships have been reporting when they get on board. Most of the vessels are in port for one or two days with the exception of scrap and salt vessels that will wait for a charter due to the low value of their merchandise.

Brad concluded that at this time there is insufficient information to understand current impacts and projected impacts of vessels in the Stellwagen Bank National Marine Sanctuary. There is no reliable database of the vessels transiting through the Sanctuary. A year long monitoring program that would identify every vessel type, size, route, number of crew/passengers, of each vessel while in the Sanctuary may be beneficial. This study could serve as the bases for other research projects for management practices

Presentation: The National Ship Strike Strategy

Presented by Greg Silber, NMFS Office of Protected Resources

POSSIBLY A LIMITED SUMMARY TO REPLACE THIS MAY BE PROVIDED BY GREG

A draft Strategic Plan to Address Ship Strikes of Right Whales was prevented to inform group members about NOAA Fisheries strategy. Their effort is to come up with a carefully reasoned, comprehensive, long-term, range-wide Strategy to reduce ship strikes of right whales while also minimizing adverse impacts to ports and shipping industry.

North Atlantic Right whales are highly endangered (approximately 300 individuals) and the population is either static or declining. Recovery is slowed by impacts from human activities, collisions with ships is the greatest known threat. The death of a single individual can significantly effect recovery.

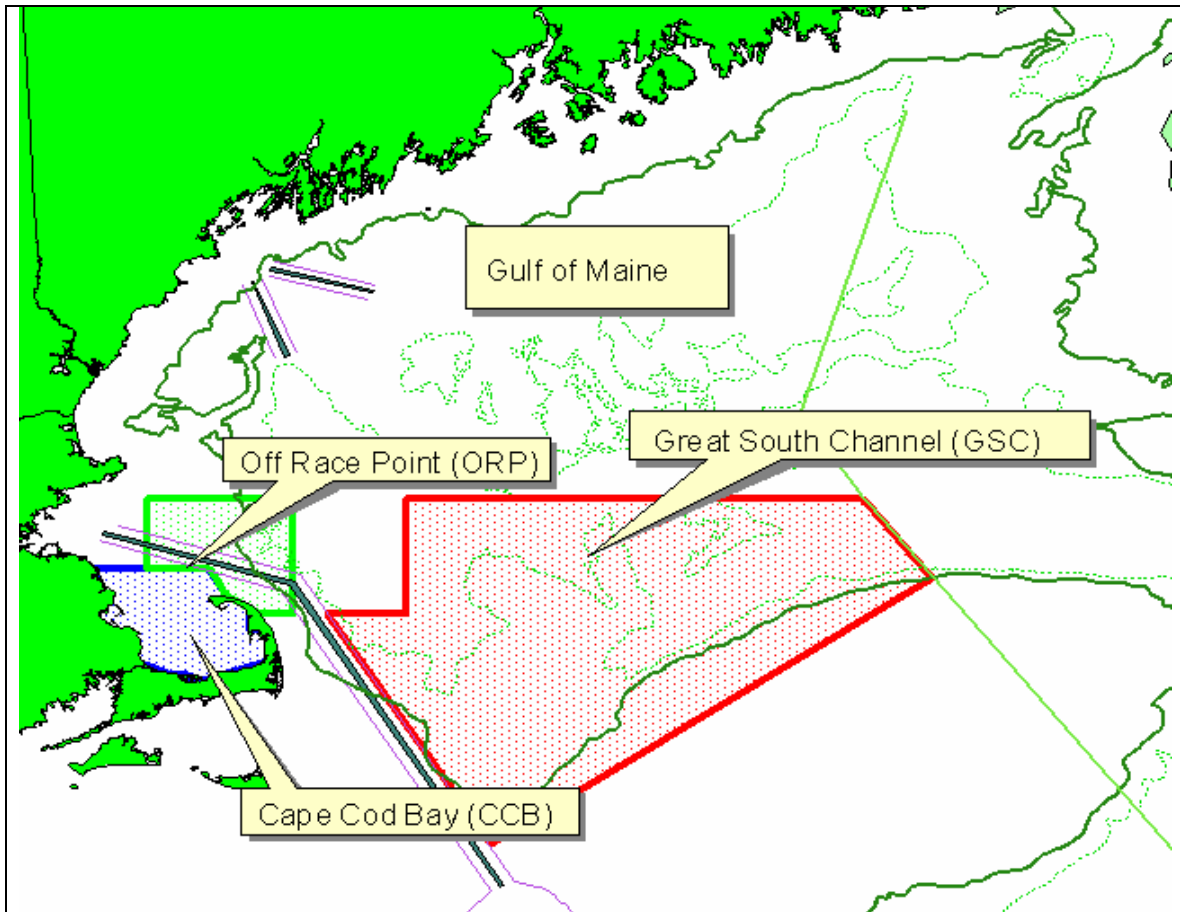
The U.S. Public is concerned about the problem of Right Whale ship strikes. Congress recognizes the problem of ship strikes and has provided annual increases in appropriations to reduce human impacts to right whales. The fishing industry is being regulated to reduce threat of fishing gear entanglement and they are aware that ship strikes are the principal threat. NGOs are acutely aware of the problem and there may be possible lawsuits.

NOAA spent over 14 months analyzing data and option. They also are working to minimize adverse impacts on ports and shipping industry to avoid port dislocations as well as avoid potential issues pertaining to international law and transiting ships. The strategy was divided into 3 regions, Southeast U.S., the waters off the Mid-Atlantic, and the Northeast U.S.

Operational measures for the Northeast U.S. include routing measures, speed restrictions, and dynamically managed areas. The Northeast U.S. is separated into four zones; Cape Cod Bay, Off Race Point, Great South Channel, and the Gulf of Maine.

The strategy would be applicable to vessels greater then on equal to 65 feet and would include; tug and tow, fishing vessels, small passenger (party & head boats), whale watch, and recreational boats.

<u>Cape Cod Bay Measures</u> January 1 st – April 30 th Seasonal Area to be Avoided with designated routes	<u>Great South Channel Measures</u> April 1 st – July 31 st Seasonal Area to be Avoided
<u>Off Race Point Measures</u> April 1 st – May 15 th Seasonal routing or speed restrictions	<u>Gulf of Maine Measures</u> Year Round Dynamic management area(s)



The presentation concludes that reducing the threat of ship strike is urgent to the survival of this species and is a National responsibility. NOAA is facing pressure from Congress, the fishing industry, & NGOs. NOAA has developed a draft Strategy and has sought interagency comment and will be seeking public comment.

Discussion

The presentation of the NOAA Fisheries strategy is the proposed strategy and this was the first viewing of the draft by the public. NOAA Fisheries provided the working group with opportunity to preview the draft due to NOAA Fisheries overlap with the working group topic.

The group would like the Coast Guard to be involved in the working group discussion. Some concerns of the members are about questioning how the right of the Master of a vessel to operate their vessel accordingly will be addressed. There are questions about how the regulations will be enforced. NOAA is having problems dealing with the enforcement side of this internally as well. A Port Access Route Study (PARS) analysis will most likely need to be done by the Coast Guard for The Cape Cod Bay zone. Shipping lanes would most likely be developed along the western corridor.

The Advance notice of proposed rulemaking (ANPR) request for comment will be released within the next few weeks.

Presentation: SBNMS Data on shipping and whales

Presented by Dave Wiley, SBNMS

Data from the Silber data was presented to better examine possible causes and trends with shipping and whale strikes. A graph illustrating strikes by year in the Greater Stellwagen area illustrated an increasing trend from 1984 until present. Graphs representing vessel traffic within the region showed the heavy vessel traffic in and around SBNMS. Cargo vessels are getting bigger.

Several different research areas were presented. A Humpback Whale tagging study is being conducted where a whale is tagged with an audio recording device that can record pitch, roll, heading, and depth of the whale. These data can be plotted to visualize the whale's movement including fluke strokes and blows. A study utilizing the FujiFilm blimp was conducted this summer where the blimp recorded cetacean sightings along a trackline. The blimp then followed an opportunistic ship back along the track and recorder whale sightings. The project was originally set to follow scheduled ships according to the 96 hour requirement. There was a mean of approximately 10 hours difference to the reported time. The loose schedules made it difficult to intersect the vessels successfully. Future studies would require better coordination with the vessels and there locations.

The 96 hour notice is not as compliant with the tankers as it is with passenger ships. Cruise ships have real defined schedules where tankers are tidal restricted and may encounter delays due to weather, tides, daylight or other factors. Vessels coming into Boston harbor are usually tide restricted and are required to come in during daylight hours.

Presentation: Economics and modeling of ship strike measures

Presented by Hauke Kite-Powell, Woods Hole Oceanographic Institute

WHOI has conducted a study to analyze the cost and effectiveness of shipstrike management measure. The overall cost of time restrictions to Boston shipping is an estimated \$600-700,000 per year, about \$500 per ship call or about \$3,000 per affected ship call.

Estimated encounter can be calculated by overlaying effort corrected sightings data with ship traffic. The model could statistically expect 60-70 2-D encounters per year with one to two fatal ship strikes. The model must be adjusted to account for whale behaviors such as diving, feeding, mating or transiting. Other factors would include avoidance by the whale, avoidance by the vessel, the effects of speed and awareness.

Speed has no effect on estimated encounter rates. Speed adjustments may allow more effective evasive action by whales and by vessels.

An argument was made that lowering the shipping speed down could increase the value of the commodity, for example home heating costs. Hauke stated that the costs would be negligible over time. The market would respond appropriately over time. However, the industry may disagree, for example if the salt ships were forced to work 24 hours a day because the shipping rates are so expensive that they would be facing problems financially.

Discussion: Management of Commercial Vessel Traffic in the SBNMS in regards to Vessel/Baleen Whale Collisions

Several members of the working group recommend that the government should have the burden of vessel monitoring using systems such as Automated Identification System (AIS). The government should be getting collecting critical near real-time data and translating it into useful

information to the vessels/captains using Stellwagen Bank National Marine Sanctuary. A possible scenario would somehow allow the captain to get information on whale sightings and change tracks to avoid strike. Several members believe that technology would be the best approach versus blanket regulations across the sanctuary. Some regulations allow captains who strike a whale to argue that they did not know there was a whale there to hit.

Masters have the right and obligation to alter course and alter speed to best suit their trip. Most of the strikes occur with unseen whales. 50% of the operational time for the shippers are during the night which adds to the problem of the unseen whale.

It is important to the whale watching community that they know where the whales are on a daily basis. The technology may not be available to fully monitor where all of the whales are located on a daily basis. Historical information can be used to try to predict where the whales may be during a particular time. It was suggested that a change of approach from regulating the sanctuary to developing a Sanctuary program that would help to build appropriate warnings and better monitoring may better help reduce strikes.

The Off Race Point NMFS Right Whale proposed area was plotted over the SBNMS and displayed on the screen to help initiate discussion. The group questions the need to focus on the proposed box and why the focus should be directed to the entire Sanctuary. The box doesn't necessarily represent the areas that we would primarily want to regulate to reduce strike.

The group has been tasked to help prevent whale strike within the Sanctuary. The NMFS proposed area only focuses on Right Whales, is it the job of the working group to reduce strike for all whales? The group agreed that all whales need to be taken into consideration. Several members asked if NMFS would look at other species for this regulation. NMFS has decided to focus on Right Whales. The Sanctuary will not overstep NMFS but will work with them. The group will continue to address the risk of vessel strike to any marine mammal, as agreed upon in the working group goal statement.

A suggestion was made to use the Whale Watching Guidelines as a model for all vessels in SBNMS. Several members suggested that the guidelines would never work for other vessel especially the commercial shipping industry. The Whale Watching Guidelines were designed to be used solely for vessels in the act of whale watching and whale watching vessels. In this example a boat cannot be a boat because a larger boat takes longer to stop or slow down. The mass of the collision is important to fatality on a strike. The avoidance action may go up if the boats speed is reduced. There are two different behavioral patterns between whale watching boats and commercial boats and they need to be evaluated by the group before making recommendations.

Is there still a need to come up with different vessel classifications? Where did the 65 foot and 300 tons vessel classification breaks come from? And are they arbitrary? A member stated that the 65 feet was intended to be for Coast Guard inspected vessels. The Coast guard does not inspect all tugs and tows according to the 65 foot size class.

A fatality of a whale is just as critical when with a whale watching boat as it is with a tuna fishing boat. From a resource management approach a whale strike is equal no matter what the vessel type. A strike may be fatal even though it was not recorded as a fatality. The strike may result in a fatality well after the strike occurs.

Raising awareness to the shipping industry could help to reduce strike. If there are no regulations on speed then the vessels will speed through the sanctuary to make the tide even if there are whales in the area. "If you're not going to make the tide then slow down."

Currently there is no way to give real-time whale reporting/warning. There is nothing currently enforceable.

One option would be, the Sanctuary make information on a near as real-time basis available to the vessels. Even if you know where a whale is it still wouldn't help to tell the vessel what to do to respond to it. It may give the boat the information but still doesn't tell the captains what to do in a particular situation. It was suggested that only one thing should be done versus options for avoidance. We'd need to get a handle on what and how often ships would be getting information and what would they do with the information.

An Example of reporting near real-time information:

"Attention vessel, we see you entering the sanctuary and would like to notify you about a group of whales 3 miles ahead of you, please change your operations as necessary."

A suggestion to dedicate a person at SBNMS to monitor and call out to vessels entering the Sanctuary about whale sightings / alerts was made. Triggers would have to be set which would require different actions according to the type of trigger. Would there have to be dynamic trigger mechanisms to separate species? Would these triggers require more guidelines? Would people know how to respond to these triggers? Would the responses to the triggers be mandatory?

Right now the commercial vessels have no access to maps/info about where the whales are. Maybe the working group should task the Sanctuary with having some sort of a reporting system that could be accessible by the commercial vessels and would help to increase awareness. A system in place where there is a near real-time information system that could report whale sightings of all whales and turn that information back out to the industry might work but not if it is voluntary. Voluntary measures may not work. Once an agreed upon technology exists that can help protect whales then it be used. Currently the only viable options would be re-routing and speed restrictions. Will re-routing reduce strike or will it simply displace it?

The group members have several different opinions about vessel sizes and types.

A research recommendation was made to monitor vessel speeds and tracks. A one year assessment of all vessels in and around the Sanctuary would be beneficial. More information on smaller vessels and recreational vessels needs to be obtained. There is already reasonably good data collected for Whale Watching vessels and Commercial Shipping Vessels.

A research recommendation was made to utilize the Vessel Trip Report (VTR) data to help evaluate the uses of the Sanctuary.

A research recommendation was made to study the relative distance of a whale to the vessel and how a whale responds to the vessel. Studies on relevant distance at which whales react to an approaching vessel by blimp/ aerostat, or instrumental animal.

A research recommendation was made to research the feasibility of monitoring vessels by utilizing Automated Identification System (AIS) technology.

A research recommendation was made to monitor vessel traffic and speed for consistency across years, especially by remote VTR or AIS Sensing.

A research recommendation was made to model the risk to small marine mammals risk of being taken into jet boat intakes and possible mitigation.

Research feasibility of interactive near real-time system to inform commercial vessels and ferries of location of whales and determine whether a trigger exists that would require greater concern or action.

The group struggled reaching a consensus about recommendations. Recommendations can be presented to the SAC with multiple options. The group does not need to reach a consensus.

Recommendations to be worked on before next meeting.

A. Right Whales should have special protection:

Option 1 - All vessels year round.

Rationale

Option 2 - Vessels >65ft from 4/1 – 5/15 suggest Sanctuary partner w/ NMFS to ensure the NMFS Plan best reduces probability of ship strike.

Rational

Option 3 - Evaluate feasibility and effectiveness of AIS system for monitoring and protection 1/1 thru 5/15.

Rationale

rec. dedicated seasonal plan for Sanctuary.

B. All Species and All Vessels:

1. Make real time info available for all commercial vessels.

2. Outreach – provide guidelines to mariners. Discuss here the ww guidelines and determine which should apply to all vessels.

3. Adapt to improved technology as available

C. Compliance

- Make regulatory if compliance remains poor

- For whale watchers and others as desired – Sanctuary certification program to be made public

- Industry funded compliance/monitoring study

- Sanctuary compliance/monitoring study

Gerry E. Studds Stellwagen Bank National Marine Sanctuary
Management Plan Review

Vessel Strike Working Group – Draft Agenda

Date: 5 April 2004

Location: Stellwagen Bank NMS HQ, Scituate

Marine Mammal Vessel Strike Meeting Summary 11
2004

Meeting Date: April 5,

Version 1 (MAT): April 9, 2004

TIME	TOPICS AND OBJECTIVES
9:00-9:15	Old Business <ul style="list-style-type: none"> - Review Meeting Summary - Updates on Requested Information Discussion Leader: Mason Weinrich /Dave Wiley
9:15-9:35	Action Plans: Format and Contents Presenter: David Wiley, SBNMS
9:35-10:05	Presentation: The Mandatory Ship Reporting System (MRS) and Commercial Vessel Traffic around the SBNMS Presenter: Pat Gerrior, NMFS
10:05 – 10:30	Presentation: Commerical Shipping and Cruise Data from the Port of Boston Presenter: Brad Wellock, Massport
10:30 – 11:45	Presentation: The National Ship Strike Strategy Presenter: Greg Silber, NMFS Office of Protected Species
11:45-12:00	Presentation: SBNMS Data on shipping and whales Presenter: Dave Wiley, SBNMS
12:00-12:30	Presentation: Economics and modeling of ship strike measures Presenter: Hauke Kite-Powell, Woods Hole Oceanographic Institute
12:30 – 13:00	Lunch (Video: whales and ships from the Blimp)
13:00 – 15:30	Discussion: Management of Commercial Vessel Traffic in the SBNMS in regards to Vessel/Baleen Whale Collisions Objectives: <ol style="list-style-type: none"> 1. Synthesize and review morning presentations, 2. Discuss management options (e.g., Is status quo sufficient? Is NMFS strategy sufficient? If not, what additional measures might be considered?) 3. Discuss costs and benefits of various strategies and options 4. Begin formulation of draft action plan Discussion leader: Mason Weinrich
15:30 – 16:15	Discussion: Whale Watch Guideline Compliance Plan In this discussion we will return to the part of the whale watch plan that was left unfinished at the last meeting, assuring compliance of the whale watch guidelines that protect whales from the risk of collision.

16:15 – 16:30	Conclusion and looking forward <ul style="list-style-type: none">- Next Steps- Review Agreements and Data Requests
---------------	--

DRAFT